



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/641,373	08/13/2003	Aryan Saed	11178-13	9615
21323	7590	12/15/2004	EXAMINER	
TESTA, HURWITZ & THIBEAULT, LLP HIGH STREET TOWER 125 HIGH STREET BOSTON, MA 02110			NGUYEN, PATRICIA T	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

26

<b>Office Action Summary</b>	Application No. 10/641,373	Applicant(s) SAED, ARYAN	
	Examiner Patricia T Nguyen	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-77 is/are pending in the application.  
     4a) Of the above claim(s) 38-40, 48 and 61-67 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11, 19-24, 32-34, 45, 47 and 68-77 is/are allowed.
- 6) ☒ Claim(s) 12-18, 25-31, 35-37, 41-44 and 46 is/are rejected.
- 7) ☒ Claim(s) 49-60 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                              |                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/3/03</u> . | 6) <input type="checkbox"/> Other: ____                                                |

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C.

121:

- I. Claims 1-37, 41-47, 49-60, 68-77 drawn to a system for processing an input signal, classified in class 330, subclass 149.
- II. Claims 38-40, 48, 61-67 drawn to a method of initializing phase correction, classified in class 327, subclass 2.

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as initializing a phase correction in a post-distortion arrangement. See MPEP 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Jason Fiorillo on December 9, 2004 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-37, 41-47, 49-60, 68-77.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 38-40, 48, 61-67 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-18, 25-31, 35-37, 41-44, 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 12 it is defined in step f1 that the replica of the input signal is delayed and in step f4 that the replica of the input signal is used to determine the predistortion; however, it appears from the disclosure that the delayed replica rather than the replica per se is used to determine the predistortion.

Claim 27 specifies "a delay subsystem for delaying said input signal" when it appears from the disclosure that it is a replica of the input signal that is delayed, not the input signal itself.

***Double Patenting***

Claims 12-18, 25-31, 35-37, 41-44, 46 of this application conflict with claims 12-18, 25-31, 35-37, 41-44, 46 of Applications No. 10/613, 856, 10/641,374, and 10/641,371. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one

Art Unit: 2817

application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Claims 12-18, 25-31, 35-37, 41-44, 46 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 12-18, 25-31, 35-37, 41-44, 46 of copending Applications No. 10/613, 856, 10/641,374, and 10/641,371. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 27-28 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Cavers.

Refer to fig. 1 of Cavers, a main amplifier A1 has the input signal to it predistorted in an adaptive fashion. Controller CTI may be read as the determining means claimed as it will determine the predistortion provided by the adjuster CGAI which may be read as the adjustment means claimed. The

Art Unit: 2817

feedback network that results in line 100 being fed to the controller may be read as the update means claimed since the outputs on lines 110,115 are incremented to achieve a lower value on line 100 in one embodiment (see col. 2, lines 9-16 of Cavers). Delay DLI may be read as the delay subsystem as it provides a delayed input to the controller (via line 105 and coupler S3) and paths 25,45,90,100 with related couplers S2,C1,S4,S5 may be read as the feedback subsystem claimed.

Regarding claim 28, CGAI receives parameters from CTI to cause predistortion of the input signal.

Regarding claim 31, since the feedback network combines the delayed input and output of the main amplifier A1 the predistortion will be dependent thereon.

### ***Allowable Subject Matter***

Claims 1-11,19-24, 32-34, 45, 47, 68-77 are allowed.

Claims 49-60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents # 6,388,518 B1, # 6,211,733 B1, # 6,043,707, # 5,650,758 contain some limitations of the claimed invention.

Art Unit: 2817

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia T Nguyen whose telephone number is (703) 308-1927. The examiner can normally be reached on 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 703-309-4940. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PTN  
December 13, 2004

*Patricia Nguyen*  
**PATRICIA NGUYEN**  
**PRIMARY EXAMINER**